

REMARKS

Entry of the foregoing Amendment and reconsideration of this application are requested. Claim 26 has been amended, claims 27-37 have been cancelled, claims 38-41 have been withdrawn and claim 26 remains the single claim pending in this application.

Applicant reserves the right to file one or more divisional applications to pursue allowance of withdrawn claims 38-41.

Claims 26 and 37 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Curtiss in view McCann. The Examiner contends it would have been obvious to one having ordinary skill in the art to form the torque transmitting element of Curtiss such that it passes through at least one of the rotatable elements, and to form the retaining element of Curtiss as engageable with the torque transmitting element to secure the interlocked tool elements together as taught by McCann.

The object of the invention as set forth in claim 26 of this application is the unique ability to simultaneously transmit internal torque and efficiently couple any two tools having housings and rotatable elements inside the housings together at adjustable angles. In the prior art, various rotating parts in a pair of tools of this type transmit rotary torque only, while the tool housings separately provide the coupling function between the tools. This leads to many additional expensive parts and requires certain tools and other components to interconnect the tool pair. As will be discussed below, Applicant relies on lug interlocks that allow any and all tools having housings and internal rotatable elements to be joined at various angular positions. At the same time, Applicant forms a combined torque transmitting and coupling joint not previously known.

Claim 26 has been amended to recite a method of joining two tools having housings and rotatable elements inside the housings together at various adjustable angles, and simultaneously transferring torque through at least one of the tools. The method now specifies providing each tool housing with a respective mating interlock configuration in the vicinity of one of the rotatable elements by forming a series of identical lugs encircling and projecting beyond an end of a respective rotatable element in the

respective housing; engaging the interlock configuration on each tool housing so that the tools are interlocked together with the rotatable elements and the housings aligned, and the lugs on one tool housing received in the gaps between the lugs on the other tool housing; passing a torque transmitting element through at least one of the aligned rotatable elements in the housings; and engaging a retaining element with the torque transmitting element to continuously secure the interlocked tool housings together at a selected adjustable angle to form a rotary torque transmitting joint with only the rotatable element in the housings, the torque transmitting element and the retaining element forming a combined torque transmitting and coupling function.

The primary reference Curtiss is representative of known prior art wherein rotary torque is transferred from square shaft 32 in a first tool with housing 12 to rotatable drive gear 88 in a second tool having housing 66. The actual coupling of the tools is accomplished by connecting the housings 12, 66 through clamps 56R, 56L, nut 64, collar assembly 42 (having female splines 48 matable with male splines 104) and fasteners 62. Further connection is required and provided by C-shaped ring 108 which keeps male and female splines 104, 48 engaged.

The Examiner acknowledges that Curtiss does not disclose passing a torque transmitting element through at least one rotatable element, and providing a retaining element engageable with the torque transmitting element to secure the interlocked tool housings together. Curtiss also fails to teach forming a series of identical lugs spaced apart by gaps and fixed directly on each tool housing which will permit any two tool housings to be coupled together at a variety of angular positions. In contrast, each tool housing of Curtiss has a discretely-shaped set of male or female splines which severely restricts coupling tool housings other than 12, 66 together. Further, Curtiss does not show or suggest forming a combined torque transmitting and coupling function using only a transmitting element, a retaining element and the internal rotatable elements in the tool housings.

Secondary and teaching reference McCann discloses a driving cartridge securing mechanism to a wrench handle, and a method which only allows the handle 20 to hold the driving cartridge 10 at different angles. A barrel 40 is rotatably disposed between the driving cartridge 10 and the handle 20 for receiving a spring-biased pawl 30 and coupled to the pawl 30 for selectively moving the pawl 30 into and out of engagement with the teeth 14 on cartridge 10. A shaft 50 with torque transmitting ribs 51 is keyed to handle 20, passes through the pawl 30 and the cartridge 10 and carries a clamping ring 54 for securing the cartridge 10, handle 20 and barrel 40 together. McCann does not disclose any internal torque transfer through his tools.

The Examiner states that McCann was applied to the rejection of the claims to teach only the concept of providing a torque transmitting element 50 passing through at least one of the elements and providing a retaining element 54 engageable with the torque transmitting element 50 to secure the interlocked tool elements together. The Examiner further states that the test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art based on *In re Keller* 208 USPQ 871.

Applicant maintains that a prior art reference must be considered in its entirety as a whole, including portions that would lead away from the claimed invention (emphasis added). MPEP 2141.02. Applicant's invention deals with the coupling of tools having rotatable elements inside the housings. McCann teaches passing shaft 50 through rotatable pawl 30 which is outside and between tools 10, 20. While clamping ring 54 is engaged on shaft 50 to hold tools 10, 20 and barrel 40 together, the tools 10, 20 are not continuously interlocked together at a selected adjustable angle as shown in Fig. 4 of the '565 reference, and no rotary torque transmitting joint is formed. Considering McCann's disclosure as a whole, a skilled tool artisan might be taught to modify Curtiss' collar assembly 42 so that the male and female splines 48, 104 would be selectively engageable with one another while the housings 12, 66 are connected together.

Further, one skilled in the art would not be expected from McCann and Curtiss to eliminate the complicated coupling hardware which exists between two tools having housings and internal rotatable elements, and to appreciate the advantages obtained by placing universal or interchangeable lug interlocks directly on each tool housing to permit coupling of any two tool housings having internal rotatable elements. McCann may show a similar interlock 14 on cartridge 10, but does not teach placing an identically-shaped interlock directly on handle 20. Rather, one skilled in the art is only motivated to couple interlock 14 with cooperating teeth on the rotatable pawl 30 lying between the tools 10, 20, not with a complimentary interlock fixed on the handle 20. Moreover, one skilled in the art would not be inspired from McCann and Curtiss to form a rotary torque transmitting joint with only the rotatable elements in the housings, the torque transmitting element and the retaining element defining a combined torque transmitting coupling function.

It is submitted that the rejection should be withdrawn because the combined teachings of the Curtiss and the McCann references do not suggest the invention as now claimed to one skilled in the art.

Applicant believes the invention provides a dramatically simplified, more efficient method which allows any two tools having internal rotatable elements to be easily combined at multiple position angles and simultaneously drive rotary motion through the combined tools. The invention significantly reduces cost and complexity in manufacture and use of these tools using a method previously unknown at the time of the invention.

It is believed that the invention is patentable over the prior art.

Accordingly, the Examiner is requested to pass this application to issue with claim 26 being deemed allowable.

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Respectfully submitted,

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